Gulf of Mexico Harmful Algal Bloom Bulletin

Region: Texas

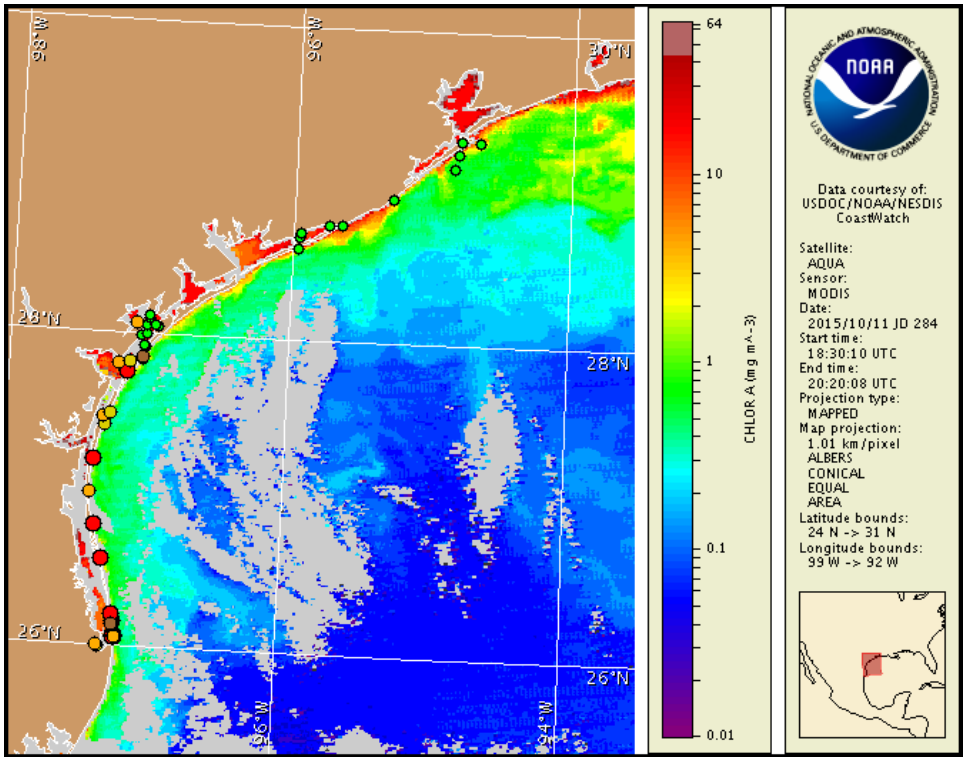
Tuesday, 13 October 2015

NOAA National Ocean Service

NOAA Satellite and Information Service

NOAA National Weather Service

Last bulletin: Thursday, October 8, 2015



Satellite chlorophyll image with possible *K. brevis* HAB areas shown by red polygon(s), when applicable. Points represent cell concentration sampling data from October 3 to 12: red (high), orange (medium), yellow (low b), brown (low a), blue (very low b), purple (very low a), pink (present), and green (not present). Cell count data are provided by Texas Parks and Wildlife Department. For a list of sample providers and a key to the cell concentration categories, please see the HAB-OFS bulletin guide:

http://tidesandcurrents.noaa.gov/hab/habfs_bulletin_guide.pdf

Detailed sample information can be obtained through the Texas Parks and Wildlife Department at:

http://www.tpwd.state.tx.us./landwater/water/environconcerns/hab/redtide/status.phtml

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To see previous bulletins and forecasts for other Harmful Algal Bloom Bulletin regions, visit the NOAA Harmful Algal Bloom Operational Forecast System bulletin archive:

http://tidesandcurrents.noaa.gov/hab/bulletins.html

Conditions Report

Karenia brevis (commonly known as Texas red tide) ranges from not present to high concentrations along the Texas coast from Galveston Bay to the Rio Grande. *K. brevis* concentrations are patchy in nature and levels of respiratory irritation will vary locally based upon nearby bloom concentrations, ocean currents, and wind speed and direction. The highest level of potential respiratory irritation forecast for Tuesday, October 13 through Thursday, October 15 is listed below:

Region: Forecast (Duration)
Bay region-Matagorda Bay: High (Tu-Th)
Bay region-Aransas Bay: Moderate (Tu-Th)
Bay region-Corpus Christi Bay: High (Tu-Th)
Aransas Pass to PINS region: Moderate (Tu-Th)
Bay region-Upper Laguna Madre: Moderate (Tu-Th)
Padre Island National Seashore region: High (Tu-Th)
Bay region-Lower Laguna Madre to Laguna Vista: High (Tu-Th)
Mansfield Pass to Beach Access 6 region: High (Tu-Th)
Beach Access 6 to Rio Grande region: High (Tu-Th)
All Other Texas Regions: None expected (Tu-Th)

Check http://tidesandcurrents.noaa.gov/hab/beach_conditions.html for recent, local observations. Dead fish and discolored water have been reported in Corpus Christi Bay.

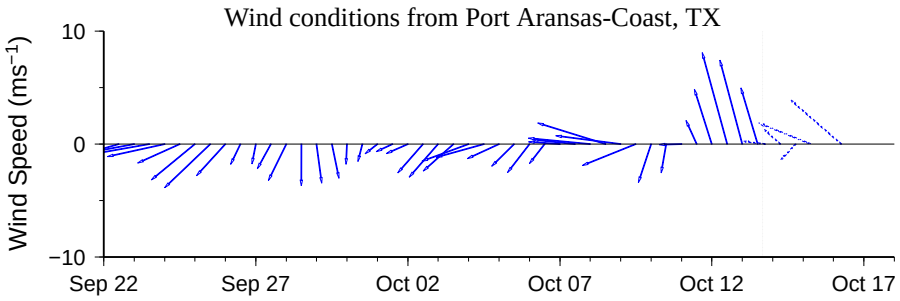
Analysis

Karenia brevis concentrations range from 'not present' to 'high' from Galveston Bay to the Rio Grande, with the highest concentrations in the Brazos Santiago Pass region (TPWD; 10/5-12). TPWD is investigating fish kills reported from the Freeport to Matagorda Bay area, but *K. brevis* was 'not present' in samples collected along-and offshore from the Galveston Island to Colorado River mouth region and within East Matagorda Bay (TPWD; 10/7-9). In the Aransas Bay to Aransas Pass region, up to 'medium' concentrations were collected with the highest concentrations in Copano Bay. The Imaging FlowCytobot at UTMSI Pier in Port Aransas continues to observe *K. brevis* ranging between 'very low' to 'low' concentrations (TAMU 10/8-13). Up to 'high' *K. brevis* concentrations, along with discolored water and fish kills, continue to be reported in Corpus Christi Bay (TPWD; 10/5). Along the coast of South Padre Island *K. brevis* concentrations continue to fluctuate between 'medium' to 'high' (TPWD; 10/9-10/12). Detailed sample information and a summary of impacts can be obtained through Texas Parks and Wildlife Department at: http://www.tpwd.state.tx.us./landwater/water/environconcerns/hab/redtide/status.phtml. For information on area shellfish restrictions, contact the Texas Department of State Health Services.

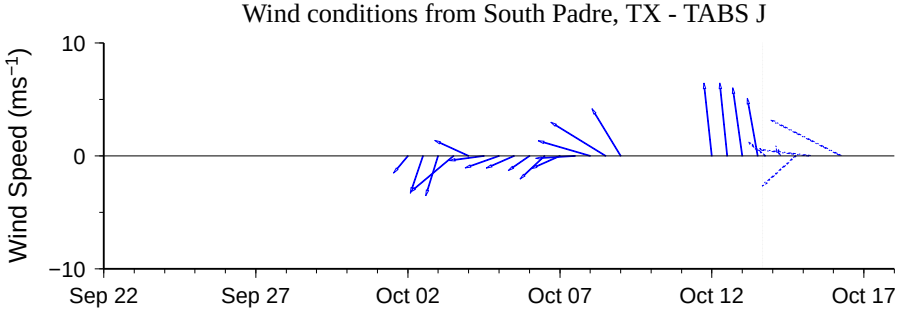
In recent MODIS Aqua imagery (10/11, shown left), chlorophyll levels appear to have decreased along much of the Texas coast. Elevated to very high chlorophyll (2 to >20 μg/L) is visible stretching along- and up to 10 km offshore from the Freeport to Matagorda Peninsula region, near where *K. brevis* has not yet been confirmed, but reported fish kills are being investigated. A large patch of elevated to very high chlorophyll (2 to >20 μg/L) is visible over 160 km south of the Rio Grande.

Forecast models based on predicted near-surface currents indicate a maximum bloom transport from coastal sample locations of 90 km north from Pass Cavallo, 70 km north from the Port Aransas region, and 50 km north from Brazos Santiago Pass from October 11 to October 16.

Kavanaugh, Yang



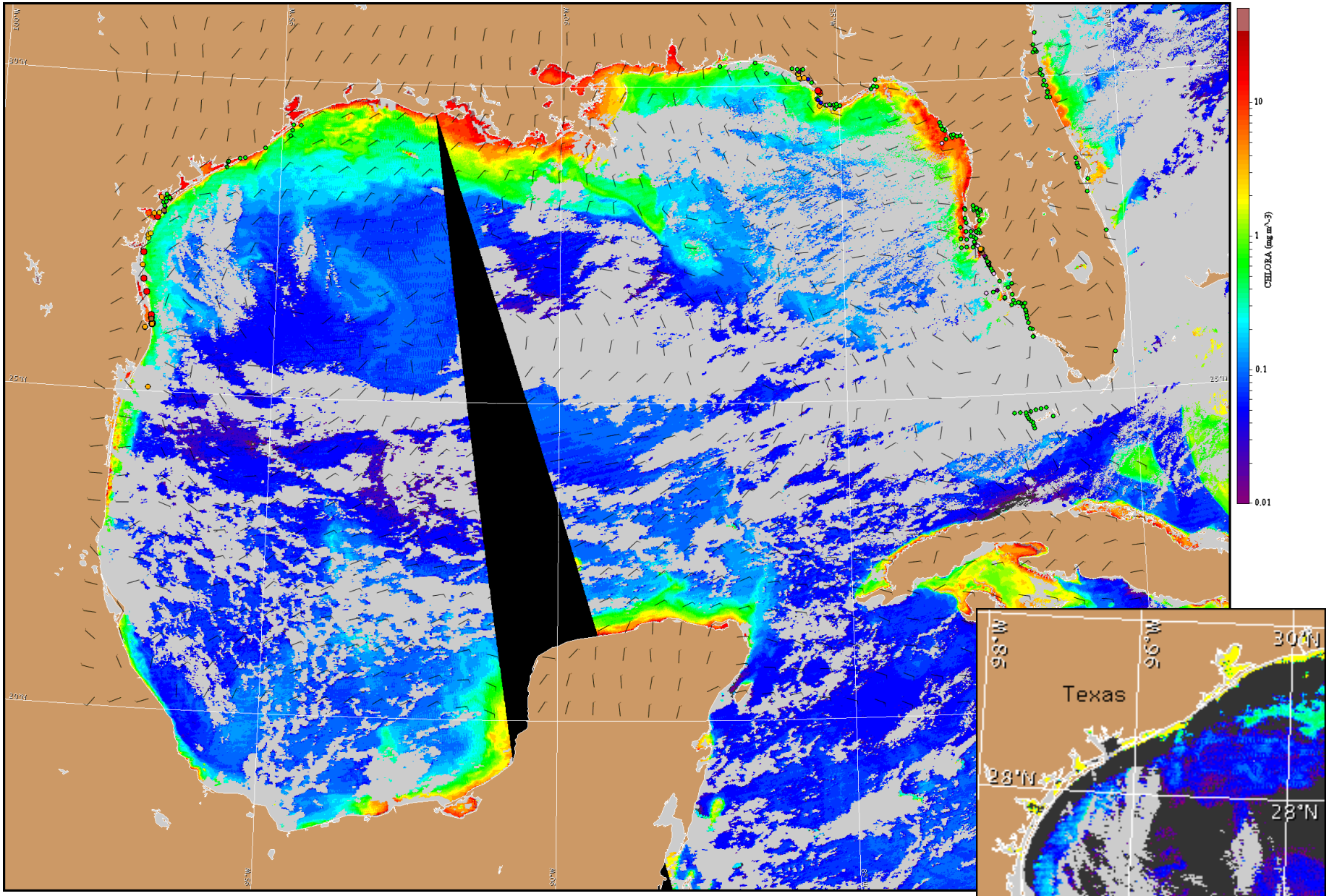
Wind speed and direction are averaged over 12 hours from buoy measurements. Length of line indicates speed; angle indicates direction. Red indicates that the wind direction favors upwelling near the coast. Values to the left of the dotted vertical line are measured values; values to the right are forecasts. Wind observation and forecast data provided by NOAA's National Weather Service (NWS).



Wind Analysis

Port Aransas to Baffin Bay: Southwest winds (5-10kn, 3-5m/s) today becoming east to southeast winds (5-15kn, 3-8m/s) this afternoon through Thursday.

Port Mansfield to the Rio Grande: South winds (7-9kn, 4-5m/s) today becoming east winds (7-8kn, 4m/s) then light winds. Light winds Wednesday becoming northeast winds (7-10kn, 4-5m/s). East winds (7-12kn, 4-6m/s) Wednesday night through Thursday.



Satellite chlorophyll image and forecast winds for October 14, 2015 12Z with points representing cell concentration sampling data from October 3 to 12: red (high), orange (medium), yellow (low b), brown (low a), blue (very low b), purple (very low a), pink (present), and green (not present). Cell count data are provided by Texas Parks and Wildlife Department. For a list of sample providers and a key to the cell concentration categories, please see the HAB-OFS bulletin guide:

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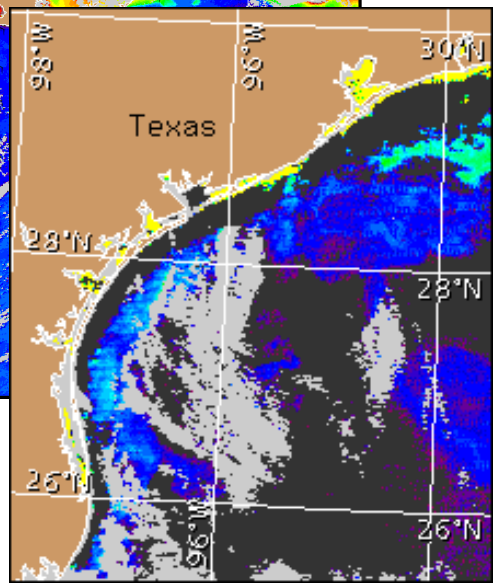

Verified and suspected HAB areas shown in red. Other areas of high chlorophyll concentration shown in yellow (see p. 1 analysis for interpretation).